

AGRICULTURAL LAND CLASSIFICATION  
BLYTH VALLEY LOCAL PLAN  
NORTHUMBERLAND  
FEBRUARY 1995

ADAS  
Leeds Statutory Group

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## SUMMARY

A detailed Agricultural Land Classification survey of 19.3 ha of land at South Beach and 8.1 ha of land at Seaton Delaval was carried out in February 1995. A semi-detailed survey of 51 ha of land at South West Newsham was carried out at the same time. All surveys were in relation to Blyth Valley Local Plan.

The land at South West Newsham consists of 50.7 ha of Subgrade 3b, 0.6ha of Urban land and 0.1 ha of Non Agricultural land. The Subgrade 3b land consists of poorly drained soils with medium or heavy clay loam topsoils overlying gleyed and slowly permeable clay subsoils at between 30 and 35 cm depth. Soil wetness and topsoil workability limitations restrict this land to Subgrade 3b.

The land at South Beach consists of 2.3 ha of Subgrade 3a and 17.0 ha of Subgrade 3b. The former consists of imperfectly drained soils where medium-textured topsoils overlie permeable heavy-textured upper subsoils and, at around 45 cm depth, gleyed and slowly permeable heavy-textured lower subsoils. Soil wetness limits this land to Subgrade 3a. The Subgrade 3b land consists of poorly drained soils where medium to heavy-textured topsoils overlie gleyed and slowly permeable heavy textured subsoils at around 30 cm depth. A more severe soil wetness and topsoil workability limitation restrict the ALC grade of this land.

The site at Seaton Delaval consists, provisionally, of 7.8 ha of Subgrade 3a land and 0.3 ha of Non Agricultural land (allotments). The Subgrade 3a land consists of light to medium-textured topsoils overlying very light to heavy-textured subsoils. Profiles vary between well and imperfectly drained. Crop growth appears stunted in parts of the north-east of the site, where colliery shale has been spread on the topsoil, and a sample has been sent for chemical analysis. The land in the north-east is, subject to the results of the analysis, restricted to Subgrade 3a by soil wetness. The remaining areas are limited to Subgrade 3a by soil droughtiness and a pattern restriction.

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AGRICULTURAL LAND CLASSIFICATION REPORT FOR BLYTH VALLEY LOCAL PLAN, NORTHUMBERLAND

1. INTRODUCTION

1.1 Location and Survey Methods

Land at three sites within Blyth Valley District was surveyed in February 1995 when the soils were examined by hand auger borings at regular intervals predetermined by the National Grid. The sites at Seaton Delaval and South Beach were surveyed with a boring density of one per hectare while the site at South West Newsham was surveyed with a boring density of one per two hectares. Three soil pits were dug (one on each site) to allow a more detailed examination of the profiles.

All assessments of land quality were made using the methods described in "Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land" (MAFF, 1988).

1.2 Geology, Soils and Drainage

All three sites are underlain by Carboniferous Coal Measures but these deposits do not occur within 1.2 m of the soil surface on any of the sites.

The sites at South Beach and South-West Newsham are overlain by deposits of boulder clay and the soils are imperfectly or, more often, poorly drained, falling in Wetness Classes III and IV. Generally medium clay loam or heavy clay loam topsoils overlie heavy clay loam or clay subsoils which become slowly permeable at between 25 cm and 50 cm depth.

The soils at Seaton Delaval are lighter-textured and well to imperfectly drained, falling in Wetness Classes I to III. Medium clay loam or medium sandy loam topsoils overlie a range of subsoil textures, which vary between medium sand and clay. Many of the topsoils in the east of the site have been affected by the spreading of colliery shale and crop growth is poor in places. A sample of this topsoil has been sent for chemical analysis and the ALC grades given in this report are, therefore, provisional.

### 2.1.1 South West Newsham

This site lies around Grid Reference NZ 298 790 and covers a total area of 51.4 ha.

### 2.1.2 Climate

Grid Reference	: NZ 298 790
Altitude	: 20
Accumulated Temperature above 0°C (January - June)	: 1331 day °C
Average Annual Rainfall (mm)	: 642
Climatic Grade	: 1
Field Capacity Days	: 161
Moisture Deficit (mm) Wheat	: 99
Moisture Deficit (mm) Potatoes	: 88

### 2.13 Land Use and Relief

At the time of survey 98 % of the site was in agricultural production, principally growing oilseed rape and winter cereals. The remainder consists of Urban and Non Agricultural land.

Site altitude varies from 17m A.O.D. in the south-east to 25 m A.O.D. in the south-west and the land is level to gently sloping (typically 0-2°) with an easterly aspect.

## 2.14 AGRICULTURAL LAND CLASSIFICATION: SOUTH-WEST NEWSHAM

The ALC grades occurring on this site are as follows:

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1		
2		
3a		
3b	50.7	98.6
4		
5		
(Sub total)	(50.7)	(98.6)
Urban	0.6	1.2
Non Agricultural	0.1	0.2
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	(0.7)	(1.4)
<b>TOTAL</b>	<u>51.4</u>	<u>100</u>

### 2.1.5 Subgrade 3b

All of the agricultural land on this site falls in Subgrade 3b. The soils are poorly drained, falling in Wetness Class IV, and consist of medium or heavy clay loam topsoils overlying gleyed and slowly permeable clay subsoils at around 30 cm depth. Soil wetness and topsoil workability restrictions are the factors limiting this land to Subgrade 3b.

### 2.1.6 Urban

This consists of Laverock Hall Road, which runs through the centre of the site.

2.1.7 Non Agricultural

This consists of an area of disturbed land in the east of the site which adjoins an electricity substation.

### 2.2.1 South Beach

This site lies around Grid Reference NZ 310 790, 1 km south-west of South Beach. It covers a total area of 19.3 ha.

### 2.2.2 Climate

Grid Reference	: NZ 310 790
Altitude	: 10
Accumulated Temperature above 0°C (January - June)	: 1342 day °C
Average Annual Rainfall (mm)	: 633
Climatic Grade	: 1
Field Capacity Days	: 158
Moisture Deficit (mm) Wheat	: 101
Moisture Deficit (mm) Potatoes	: 91

### 2.2.3 Land Use and Relief

At the time of survey all of this site was in agricultural use as either arable land (growing oilseed rape or winter cereals) or ley grass.

Site altitude varies from 10 m in the east and 15 m in the west and the land is level to gently sloping (0 - 2°) with an easterly aspect.



## 2.2.4 AGRICULTURAL CLASSIFICATION: SOUTH BEACH

The ALC grades occurring on this site are as follows:

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1		
2		
3a	2.3	11.9
3b	17.0	88.1
4		
5		
(Sub total)	(19.3)	(100.0)
Urban		
Non Agricultural		
Woodland.- Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)		
<b>TOTAL</b>	<b>19.3</b>	<b>100</b>

### 2.2.5 Subgrade 3a

A small area of Subgrade 3a land occurs in the north-east of this site. The soils are imperfectly drained (Wetness Class III) and typically consists of medium clay loam topsoils overlying heavy clay loam upper subsoils and gleyed and slowly permeable clay lower subsoils. The lower subsoils begin at around 45 cm depth and soil wetness is the factor which limits this land to Subgrade 3a.

### 2.2.6 Subgrade 3b

The remainder of this site falls in Subgrade 3b. The soils are poorly drained, falling in Wetness Class IV, and consist of medium or heavy clay loam topsoils overlying gleyed slowly permeable clay subsoils at around 30 cm depth. Soil wetness and topsoil workability problems limit the ALC grade of this land.

### 2.3.1 Seaton Delaval

This 8.1 ha site lies on the northern edge of Seaton Delaval, around Grid Reference NZ 301 759.

### 2.3.2 Climate

Grid Reference	:	NZ 301 759
Altitude	:	35
Accumulated Temperature above 0°C (January - June)	:	1316 day °c
Average Annual Rainfall (mm)	:	651
Climatic Grade	:	1
Field Capacity Days	:	162
Moisture Deficit (mm) Wheat	:	96
Moisture Deficit (mm) Potatoes	:	83

### 2.3.3 Land Use and Relief

At the time of survey all of this site was under winter cereals, with the exception of a small area of allotments in the west.

Site altitude varies from approximately 32 m A.O.D. in the north-east to 38 m A.O.D. in the south-west and the land is gently sloping (around 2°) with a north-easterly aspect.

### 2.3.4 AGRICULTURAL LAND CLASSIFICATION: SEATON DELAVAL

The ALC grades occurring on this site are as follows:

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1		
2		
3a	7.8	96.3
3b		
4		
5		
(Sub total)	(7.8)	(96.3)
Urban		
Non Agricultural	0.3	3.7
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	(0.3)	(3.7)
<b>TOTAL</b>	<b>8.1</b>	<b>100</b>

### 2.3.5 Subgrade 3a

All of this site has been provisionally mapped as Subgrade 3a. The soils are generally well to imperfectly drained, falling in Wetness Classes I to III. Medium clay loam or medium sandy loam topsoils overlie subsoils which vary in texture from medium sand to clay. Slowly permeable layers begin in places at around 70 cm depth.

Colliery shale has been spread over most of the north-east of the site and crop growth is poor in some areas. A sample has been sent for chemical analysis and these areas have been provisionally placed in Subgrade 3a (to which they are limited by soil wetness).

The areas in the south-west of the site are restricted to Subgrade 3a by soil droughtiness and a pattern limitation.

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